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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
DISTRICT H

COAL FATAL

REPORT OF FATAL ROOF-FALL (BUMP) ACCIDENT
SUNNYSIDE NO. 1 MINE
KAISER STEEL CORPORATION
SUNNYSIDE, CARBON COUNTY, UTAH

June 6, 1957

By

Thomas T. Reay, Jr.
Coal-Mine Inspector

Originating Office - Bureau of Mines
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Salt Lake City, Utah Subdistrict, Health and Safety
District H

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INTRODUCTION

About 7:30 p.m., Thursday, June 6, 1957, Melvin C. Kelly, shot firer, was killed instantly by a fall of roof rock and timbers in the top entry of the First Left section, Sunnyside No. 1 mine, Kaiser Steel Corporation, Sunnyside, Carbon County, Utah.

Melvin C. Kelly, age 47, who had about 13 years experience as a miner, the last 7 years as shot firer at this mine, is survived by his widow and 6 dependent children. Mr. John Peperakis, manager of operations, Kaiser Steel Corporation, Sunnyside, Utah, telephoned to T. T. Reay, Jr. regarding the accident at 8:55 p.m. and an investigation was made the following day. The information contained in this report was obtained from company officials, the victim's fellow employees, and from observations made at the scene of the accident.

GENERAL INFORMATION

The Sunnyside No. 1 mine, Kaiser Steel Corporation, is at Sunnyside, Carbon County, Utah, on a branch line of the Denver & Rio Grande Western Railroad, and on State Highway 123. The mine is opened by nine slopes, a rock tunnel, and two air shafts. At the time of the last regular inspection 261 men were employed, of whom 219 worked underground on three shifts and 42 worked on the surface on two shifts, 5 days a week. The average daily production of 2,800 tons of coal was mined mechanically with continuous miners and mobile loading machines, loaded into electrically driven shuttle cars and hauled to the surface in all-steel mine cars, handled by an underground hoist and by trolley locomotives.

The mine is developed in the Lower Sunnyside coal bed, which ranges from 7 to 14 feet in thickness and dips from 4 to 12 degrees in a northeasterly direction. The mine was developed by the room-and-pillar and the panel-and-entry systems. Main entries, raise entries, (bleeder entries) and dip entries were driven in sets of two, three, or four, and the intervals between the room-and-pillar entries varied according to local conditions, ranging from 250- to 600-feet apart. Pillars were recovered by the pillar-pocket method of mining; generally, the entire

thickness of the coal bed was mined on retreat. Entries were driven from 16 to 18 feet in width and rooms 26 feet in width; crosscuts were driven about 16 feet in width.

The immediate roof overlying the coal bed consists of laminated shale varying from 6 to 12 feet in thickness, 18 inches of bony coal, a 2-foot rider of coal, and 18 inches of sandstone. The systematic method of roof support, which was well-followed, consisted of using roof bolts ranging from 48 to 120 inches in length with 2½- by 12-foot airplane steel landing mats in addition to the regular 8- by 3/8-inch bearing plates. Roof bolts were placed to within 18 inches of the faces, and in most instances conventional timbers were set so as to provide additional roof support. Safety jacks or posts with large cap pieces were placed before the roof-bolting was started. In some haulageways and return airways, cribs 5 and 7 feet square were built, and recently steel yielding arches were set on the main slope and manways.

The roof was tested at frequent intervals by the workmen, and the officials stated that they examined the roof along the roadways and travelways at least once each shift, using special testing rods during their examinations.

The mine is classed gassy in accordance with the laws of the State.

The investigation committee consisted of the following persons:

Kaiser Steel Corporation

John Peperakis	Manager of Operations
T. R. McCourt	Superintendent
Julius Maki	Mine Foreman
Nick Tallerico	Night Foreman
Joe Taylor	Mine Engineer
Lewis Villegos	Section Foreman
Don L. Barham	Roof Bolter (witness)
Clifton C. Brown	Loading Operator
L. E. Jensen	Shuttle-car Operator
Basil Simmons	Miner-operator

United Mine Workers of America

Frank Stevenson	President, Local 9958
Emmett McFadden	Safety Committeeman
Henry A. Brownfield	Safety Committeeman

Bureau of Mines

Thomas T. Reay, Jr.	Coal-Mine Inspector

The last regular inspection was concluded on May 24, 1957.

DESCRIPTION OF ACCIDENT

The First Left section of the mine is under about 2,300 feet of cover and during development roof bolts, ranging from 6 to 8 feet in length, were placed on 4-foot centers and sometimes closer. Because of the heaving action of the floor and subsidence of the roof, 10-foot bolts were installed later between the 6- and 8-foot bolts. Wooden crossbars, averaging 12 inches in diameter and 16 feet in length, were set also. Broken bars were being replaced with timbers, set skin-to-skin, during the last regular inspection.

The accident occurred in the top entry of the First Left section of Sunnyside No. 1 mine. The night shift crew arrived at the said working place about 3:30 p.m. The shuttle car was being repaired, so the men started to prepare a new place to the rise. They placed 10-foot bolts on each end of a 16-foot-long carrier bar and then removed the legs from the uphill end of the other crossbars resting on the carrier bar. The repairs to the shuttle car were completed about 5:50 p.m., so the crew loaded 10 cars of loose coal, which was lying against the rib, and then went to lunch. After lunch, Section Foreman, Lewis Villegos, instructed Kelly and Barham to return to the new working face and blast down some overhanging coal so the men would have something to stand on while roof bolting. The two men went to the working face but Barham stepped over to the low rib, about 15 feet away from Kelly, in order to disconnect the air hose, when a severe bump occurred causing crossbars and roof to fall simultaneously. Barham was protected by the timbers and mine cars beside which he was kneeling. Kelly was in line with the full violence of the bump and presumably was killed instantly by the falling coal, timbers, and rock. The bump caused so much disturbance that the place could not be examined and a search could not be made for Mr. Kelly for at least 10 minutes after the fall.

The section foreman and workmen started removing the fallen coal and rock where Kelly was last seen and soon thereafter found his body. The falling material struck him on the head and knocked him into a partly sitting position with his head facing toward the face of the entry. The cave covered an area 11-feet wide by 14-feet long by 6-feet high, including 3 rows of bolts. The caved material was finely crushed by the severity of the bump. Crossbars were broken in the area for a distance of about 100 feet.

CAUSE OF ACCIDENT

This accident was caused by a severe bump, which dislodged roof supported by roof bolts and wooden crossbars.

RECOMMENDATION

In view of the fact that all reasonable precautions relative to roof support by roof-bolting and heavy timbering had been taken and because there was no evidence that the bump was predictable, no concrete recommendation can be made. Perhaps instrumentation can be provided to predict the occurrence of such bumps. The numerous safety precautions now being carried out should be continued.

ACKNOWLEDGMENT

The cooperation of the mine officials, employees, and mine safety committeemen during this investigation is gratefully acknowledged. Special acknowledgment is made to the company for the very complete sketch which is appended.

Respectfully submitted,

/s/ Thomas T. Reay, Jr.

Thomas T. Reay, Jr.
Coal-Mine Inspector

approved by the Bureau of Mines February 25, 1963. The adopted methods appeared to be adequate at the conclusion of the preceding inspection.

The investigation committee consisted of:

KAISER STEEL CORPORATION

John Peperakis	Manager, Sunnyside Coal Mines
Thomas McCourt	Superintendent
Nick Tallerico	Mine Foreman
Walter Jones	Night Mine Foreman
Donald Ross	Mine Foreman, No. 3 mine
Vaun O'Neil	Section Foreman
Clarence Self	Safety Engineer
Bruno Dalla Corte	Underground Master Mechanic
Philip Pero	Mechanic

INDUSTRIAL COMMISSION OF UTAH

Steve Hatsis	Inspector, Coal Mines
Frank Ularich	Inspector, Coal Mines

UNITED MINE WORKERS OF AMERICA

Frank Sacco	President, Local Union 9958
Henry Brownfield	Vice President, Local Union 9958
Emmett McFadden	Member, Mine Safety Committee
Gene Trabue	Member, Mine Safety Committee

UNITED STATES BUREAU OF MINES

Thomas T. Reay, Jr.	Coal Mine Inspector
Emmanuel J. Grillos	Mining Health and Safety Engineer

Details concerning this accident are shown in the sketch.

The preceding inspection of this mine was made April 6-10, and 13-16, 1964.

DESCRIPTION OF ACCIDENT

The day-shift crew departed from the 11 left working section about 2:30 p.m. Wednesday, June 3, 1964. Conditions at that time appeared to be normal. The day shift section foreman reported on the surface between change of shifts to the night shift section foreman, that conditions in the 11 left working section were normal and that No. 9 room had broken through to the 10 left bottom entry. In addition,

Melvin C. Kelly

FATAL ACCIDENT DATA

1. Daily employment 261 Time of accident: 7:30 p.m.

2. General location of accident 1 left, top entry

3. Job when injured stoper helper Regular job shot firer

4. Age 47 Yeers experience regular job 7 years In mines 13 years

5. Dependents: Widow yes Number of children under age 18 6 Others 3

6. Method of loading in place where accident occurred: Mechanical yes

Note: Items 7 to 14 should be included if the fatality results from a fall of roof, face, or rib.

7. Location: Face yes Haulageway yes

8. Type of permanent support in use at location where accident occurred: Crossbars Bolts 6-8-10 feet long

9. Type of temporary support in use in place where accident occurred: Posts and crossbars

10. Did injury occur inby last permanent roof support? No

11. Distance from last supports to face: Permanant 10'-8" after cave 2 feet before cave

12. Was standard support plan adopted? yes Was it followed in this place yes.

13. Last prior visit by mine official: Date June 6, 1957 Time 7 p.m.

14. Approximete dimensions of fall in inches: Length 168 Width 128 Maximum thickness 76 inches (estimated)